

STRESS ASSESSMENT AND COPING STRATEGIES FOR NURSES IN SELECTED PRIVATE HOSPITALS OF MALAPPURAM DISTRICT, KERALA

FOUSIYA M¹, MANOJMATHEW² & LEENA LEON³

¹Student, Family Resource Management, Rajagiri.College of Social Sciences, Ernakulam, Kerala, India

²Assistant Professor, Department of Human Resource Management, Rajagiri.College of Social Sciences, Ernakulam, Kerala, India

³Assistant Professor, Department of Home Science, Saint Teresa's College, Ernakulam, Kerala, India

ABSTRACT

Stress is an important psychological concept that affects health, well-being and job performance in negative dimensions and is pandemic in today's society. Health care and nursing have not been spared. Increasing patient acuity and decreased length of stay in both acute and home care settings, a composite of new technology, managed care, increased supervisory responsibilities, risk and fear of litigation, and the current nursing shortage etc. put increased stress on today's nurses. Other crucial factors that may contribute to workplace stress include team conflict, unclear role expectations, heavy workload, and lack of autonomy. Every day nurses experience stress either acute or chronic in nature. It may be psychological, physiological, emotional, social, occupational and personal which may have negative effects on their health thus personal and work behaviours. The study investigated the various aspects of stress and factors contributing to stress among nurses working in selected private hospitals in Malappuram district, Kerala. It also aimed at addressing the issue of how stress at work can be effectively managed, reduced or prevented thus to enhance the health of nurses, as well as their personal and professional work behaviours. The participants were selected using purposive sampling from 4 hospitals in Malappuram District and belonged to the age group of 20-35 years of age. The sample consisted of 50 nurses belonging to the age group of 20-35 years of age. The tool used for the study was a questionnaire tagged "Stress assessment questionnaire". It consisted of two sections - a preliminary section to collect the background details of nurses and scales to measure various aspects of stress. The stress assessment scales included were 1. a perceived stress scale developed by Cohen, Kamarck, and Mermelstein (1983), physical and psychological symptoms checklist and stress coping skills and personal resources preference rating scale. Out of 50 samples studied, 92 percentage were single and belonged to the nuclear family. Most (92%) of them had 8-10 hours of work on regular days and 72 percentage had to work 11-12 hours on peak days. The study established the fact that job stress had significant effect on physical and psychological well-being of nurses. It also established that there was significant individual difference in the factors that contribute to stress in home and work environment. Based on these findings a coping strategy - computer based training (CBT) module was developed. Stress coping training intervention using the developed CBT was also conducted for nurses. The present study emphasized the need for intervention strategies that can be used to decrease the target stress and/or help to cope with stressors. Study also recommended proper implementation of stress coping strategies meant for nurses on a regular basis and frequent need-based follow-up programmes which are essential to enhance a stress free and quality life to the nursing community.

KEYWORDS: Stress, Nurses, Stress Assessment, Coping Strategies, Training Module

INTRODUCTION

Stress is pandemic in today's society. Health care and nursing have not been spared. Increasing patient acuity and decreased length of stay in both acute and home care settings, a composite of new technology, managed care, increased supervisory responsibilities, risk and fear of litigation, and the current nursing shortage all place increased stress on today's nurses. Other key factors contributing to workplace stress include team conflict, unclear role expectations, heavy workload, and lack of autonomy (Calnan & Wainwright, 2001; Huber, 1995; Peterman, Springer, & Farnsworth, 1995; Taylor, White, & Muncer, 1999). The above manifestations can be clearly observed in hospital nursing staff, which may have negative effects on their health, personal and work behaviour. Manpower is the most important element determinant of success when compared to other determinants like money, machinery and technical know-how in any organization. Failure to acknowledge and take action to reduce nursing occupational stress has potential physiological, psychological, spiritual, occupational, and economic effects. It is imperative therefore, that all stakeholders be committed to the reduction or prevention of job stress experienced by the nurse. This will enhance their welfare, efficiency and quality of care given to the patients. Therefore, there is need for further research in this direction.

METHODOLOGY

The methodology adopted for the study entitled "Stress Assessment and coping Strategies for Nurses" included 4 phases. The first phase of the research included a survey to assess the stress of nurses working in selected private hospitals. Four private hospitals in Malappuram district were selected for this study. Fifty nurses belonged to the age group of 20-35 were constituted the sample. Purposive sampling technique was used to identify the sample. The questionnaire had two sections, first part to elicit background information of nurses and a second part of the questionnaire tagged "stress assessment of nurses". The other tools included in the questionnaire to assess the stress of nurses were - (1) Perceived stress scale developed by Cohen, S., Kamarck, T., and Mermelstein, R. (1983). (2) Physical and psychological symptoms checklist and (3) coping skill preference check list. Personal interview method was used for the collection of data. The data collected from the survey were compiled and statically analysed using percentage analysis and chi-square test. Phase II included the development of a computer based training (CBT) module. There were four sections in the CBT covering various aspects of stress and various coping strategies. The third phase of the study was the conduct of training module for nurses. The training module was scheduled for one month duration, in such a way that every week of the month one section of the CBT was covered. The fourth phase of the study included an evaluation of the training module using a check list.

RESULTS AND DISCUSSIONS

Background Information

The background information section of the questionnaire was used to collect information on general profile, work details, food preferences and practices, sleeping and leisure time spending pattern of nurses.

Out of 50 subjects studied, half of the respondents (48%) were in the age group of 20-25 years, 36 percent were 25-30 years of age and nearly half of the respondents (46%) were Hindus. 96 percent of studied nurses belonged to the nuclear family, and very negligible percent (4%) represented joint family system.

More than fifty 54 percent of the respondents had permanent job while 46 percent had temporary job. Most of the respondents (92%) had to work about 10-12 hours on regular days and 6 percent of the nurses had 8-10 hours of hectic work and on peak days they (72%) had above 12 hours of work.

Regarding work experience most of the nurses (86%) had 5 years of job experience, while 12 percent had 5-10 years of experience. (94%) nurses had monthly salary pattern while only 6 percent had yearly salary pattern. Majority (80%) of nurses had Rs. 8000/- monthly salary and only 20 percent had monthly salary ranged between Rs.8001-10,000/-. Out of 50 subjects studied, majority of nurses (64%) had nearly 5 hours of sleep, while 24 percent got 5-7 hours of sleep.

Multiple responses given by nurses on leisure time spending pattern revealed that 82 percent of the subjects spent time for watching TV, followed by listening music (74%) and only 44 percent preferred computer or internet during their leisure time. Regarding outdoor tasks more than half of the respondents (64%) found time to walk regularly and 28 percent preferred cycling during their leisure time.

Considering the food preferences and practices, 58 percent of respondents were vegetarians and 42 percent were non- vegetarians. Sixty six percent of the nurses followed 3 meals a day pattern. 48 percent of nurses studied, skipped breakfast and 18 percent skipped lunch and only 4 percent skipped dinner. Half of the respondents (64%) liked home food, and 34 percent liked canteen and nearly three fourth of the respondents (74%) preferred eating out.

Stress Assessment of Nurses

The second phase of the survey included the stress assessment of nurses. A questionnaire tagged stress assessment of nurses was used for the data collection. All the statements were rated against a rating scale. The data collected for the study are compiled and statistically analysed using Chi-square test as the variables contributing for stress assessment are qualitative in nature. The tables 1 and 2 depicted the detailed analysis of various aspects of stress assessment.

Stress Factors

Stress factors of nurses studied are discussed in table -1

Table 1: Results of the χ^2 Analysis of Stress Factors

Stress Factors	Agree	Undecided	Disagree	χ^2	df	p- Value
Upset because of something that happened unexpectedly	44 (88.0%)	3 (6.0%)	3 (6.0%)	65.940	2	P<0.001**
Unable to control the important things in life	15 (30.0%)	19 (38.0%)	16 (32.0%)	0.529	2	P>0.05
Felt nervous and stressed	25 (50.0%)	21 (42.0%)	4 (8.0%)	14.647	2	P<0.001**
Confident about the ability to handle personal problems	39 (78.0%)	4 (8.0%)	7 (14.0%)	44.294	2	P<0.001**
Felt that things are going your way	28 (56.0%)	17 (34.0%)	5 (10.0%)	15.589	2	P<0.001**
Could not cope with all the things that should be done	19 (38.0%)	24 (48.0%)	7 (14.0%)	8.999	2	P<0.05
able to control irritations in life	30 (60.0%)	12 (24.0%)	8 (16.0%)	16.177	2	P<0.001**
Felt that you were on top of things	22 (44.0%)	14 (28.0%)	14 (28.0%)	2.529	2	P>0.05
Angered because of things that were out of control	40 (80.0%)	7 (14.0%)	3 (6.0%)	48.529	2	P<0.001**
Felt difficulties were piling up so high that you could not overcome them	24 (48.0%)	21 (42.0%)	5 (10.0%)	11.294	2	P<0.01

10 different factors were considered for assessing the stress of nurses. The factors considered were upset because of something happened unexpectedly, unable to control important things in life, felt nervous and stressed, confident about the ability to handle personal problems etc.

The significance of the fitted sample was tested using chi-square analysis. The amount of validity explained by the chi-square analysis and its relative importance of the parameters in the model were estimated. The most significant variables ($P < 0.001$) among stress factors were upsets, nervousness, confident about the ability to handle personal problems, felt that things are going your way, able to control irritations in life and angered because of things that were out of control and out of control of things.

Physical Health Symptoms

The factors considered under physical health symptoms of nurses for assessing the stress of nurses were head ache, back ache, pain in limbs, loss of appetite, shortness of breath, skin problems, frequent colds and illness, neck pain, fatigue etc.

Among physical health symptoms of nurses studied the most significant variables ($P < 0.001$) that contribute to nurses were shortness of breath, skin problems cold and illness, fatigue, nausea, heat pounding and proneness to accidents and injuries.

Psychological Health Symptoms

Psychological health symptoms considered for assessing the stress of nurses were, depression, irritability easily discouraged, little joy in life, apathy, loneliness, fewer contact with friends, negative attitude, negative self-talk, poor concentration etc.

Among psychological health symptoms the fitted model were most significant ($P < 0.001$) as observed were irritability, discourage, apathy, negative attitude, negative self-talk, poor concentration and bad temper.

Home and Work Environment Reasons for Stress

Home and work environment reasons for stress of nurses studied are in table-2

Table 2: Results of the χ^2 Analysis of Home and Work Environment Reasons for Stress

Home and Work Environment Reasons for Stress	Never	Sometimes	Frequently	χ^2	df	p-Value
Lack of Facilities (equipments) both at work and home.	11 (22.0%)	29 (58.0%)	10 (20.0%)	13.471	2	$P < 0.001^{**}$
Improper Lighting at Work Places	17 (34.0%)	24 (48.0%)	9 (18.0%)	6.657	2	$P < 0.05$
Poor Ventilation	20 (40.0%)	22 (44.0%)	8 (16.0%)	6.765	2	$P < 0.05$
Lack of Space	15 (30.0%)	21 (42.0%)	14 (28.0%)	1.705	2	$P > 0.05$
Lack of Storage Space of Things	13 (26.0%)	20 (40.0%)	17 (34.0%)	1.47	2	$P > 0.05$
Lack of Comfortable Work Heights	18 (36.0%)	24 (48.0%)	8 (16.0%)	7.76	2	$P < 0.05$
Ill Health	11 (22.0%)	33 (66.0%)	6 (12.0%)	24.295	2	$P < 0.001^{**}$
Compelled to Work	8 (16.0%)	30 (60.0%)	12 (24.0%)	16.176	2	$P < 0.001^{**}$
Incorrect Posture at Work	14 (28.0%)	29 (58.0%)	7 (14.0%)	14.882	2	$P < 0.001^{**}$
Emotional Disturbances	2 (4.0%)	28 (56.0%)	20 (40.0%)	20.872	2	$P < 0.001^{**}$

Table 2: Contd.,

Strained Relationship with Others	16 (32.0%)	25 (50.0%)	9 (18.0%)	7.589	2	P<0.05
Limited Support from Colleagues and Family	16 (32.0%)	19 (38.0%)	15 (30.0%)	0.481	2	P>0.05
Lack of Time	4 (8.0%)	29 (58.0%)	17 (34.0%)	18.412	2	P<0.001**
Too many Responsibilities	5 (10.0%)	31 (62.0%)	14 (28.0%)	20.529	2	P<0.001**

Home and work environment reasons considered for the assessment stress of nurses were lack of facilities both at work and home, improper lighting at work places, poor ventilation, lack of space, lack of storage space of things, lack of comfortable work heights in work areas etc.

The relatively significant factors ($p<0.001$) contributing to stress among work environment were lack of facilities available, ill health, compulsion to work, incorrect posture at work, emotional disturbances, and lack of time and overcrowding of responsibilities.

Development of Computer Based Training Module (CBT)

Assessment of various aspects of stress experienced by nurses clearly showed that they were under stress due to a host of reasons. Considering all the assessed factors of stress, a computer based training module (CBT) to resolve stress and various coping strategies according to the needs of the studied subjects were formulated. Materials for the preparation of CBT were collected from journals, magazines, and internet and from various experts in the field.

The CBT module consisted of four sections. First section of the computer based training (CBT) module consisted of introduction of stress, stressors and signs and symptoms of stress. The second section of the computer based training (CBT) covered cognitive behavioural activities, third section was based on yoga and meditation for stress relief and the fourth section of the CBT was on dietary management of stress.



Figure 1: Some of the Slides Included in the CBT

Conduct of the Computer Based Training (CBT) Module

The computer based training module was conducted for nurses who have participated in the survey of stress assessment. According to their convenience of participation the sections of the CBT was scheduled. The duration of the training was for one month. Each week one section of the CBT was covered.

The nurses were actively took part in the training module and they were so eager to learn, practice and adopt these coping strategies to their daily work environment to reduce stress. Majority of nurses who have attended the training module agreed that the strategies for coping stress were informative and very useful to them.

Evaluation of Computer Based Training (CBT) Module

Results of evaluation of computer based training (CBT) modules are discussed in table-3

Table 3: Check List used for the Evaluation of Training Module

Parameters	P	F	G	V.G	E
Computer Based Training (CBT)Module Was					
Informative	2	2	4	38	4
Interesting	2	2	8	33	5
Useful	0	1	2	44	3
Appropriate	1	2	4	41	2
Innovative	3	1	12	33	1
Simple and Attractive	0	1	2	46	1
Pictures are comprehensive	2	5	3	36	4
Training Module Was:					
Informative	0	2	4	38	6
Interesting	2	1	3	33	11
Useful	0	1	3	44	2
Appropriate	0	1	4	39	6
Innovative	1	1	1	35	12
Attractive	2	2	3	39	4

The evaluation check list showed that most of the participants agreed that the computer based training module was very useful to them. The prepared CBT was informative, useful, interesting, appropriate, simple and attractive and comprehensive. The participants were actively involved and also interested in taking notes of stress coping strategies of cognitive behavioural activities, yoga and meditation and dietary management. The participants well appreciated the training module.

CONCLUSIONS

The findings of the study supported that multiple pressures are associated with nursing responsibilities and the health care setting which can be translated into significant stress levels among nurses. The study emphasised the need of popularizing various stress coping strategies which are suitable and adaptable to the nursing profession.

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